

What is claimed is:

1. A switching system connected to Internet for providing an AO/DI service to at least one subscriber terminal, wherein  
5 the switching system includes a subscriber switching subsystem, which comprises:

a subscriber switching circuit for performing a layer 2 protocol process for providing the AO/DI service to the subscriber terminal;

10 a device controller for reading a packet data stored in the subscriber switching circuit and adding a corresponding subscriber information to the packet data to transmit the packet data in case an AO path set-up is requested from the subscriber terminal, but also for  
15 transmitting the original packet data without adding the corresponding subscriber information in case the packet data provided is to be transmitted through a DI path established for the subscriber terminal;

a server for requesting the AO path set-up for the  
20 subscriber terminal and the DI path set-up for the subscriber terminal in case an amount of data transmitted from Internet exceeds a predetermined threshold, and performing terminal processes of a layer 3 protocol and PPP for the packet data transmitted through the AO path and the  
25 DI path;

a message switch module having an  $n \times n$  switching

structure for transmitting the packet data provided from the device controller to a corresponding server or the packet data provided from the server to a corresponding device controller through a self-routing by using the subscriber  
5 information included in the packed data;

a high process for setting the DI path for a channel corresponding to an additional bandwidth when the packet data transmitted from the subscriber switching circuit or the server includes a request for setting up the DI path;  
10 and

a router for transceiving the packet data between the server and the Internet by using an IP address included in the packet data.

15 2. The switching system of claim 1, wherein when the AO path is set, the server transmits the packet data to be transmitted between the message switch module and the router through the corresponding AO path by setting an intrinsic call number for the subscriber terminal and storing the  
20 intrinsic call number mapped to the IP address assigned by a corresponding PPP terminal process.

3. The switching system of claim 1, wherein in case the AO path set-up is requested as a result of the analysis of the  
25 packet data transmitted from the message switch module, the server inquires of the high process whether the subscriber

terminal is a legitimate receiver for the AO/DI service or not.

1. The terminal is a legitimate receiver for the AO/DI service or not.